

WE CLAIM:

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1. A corpectomy device, comprising:
  - a) a first member having a longitudinal axis;
  - b) a second member moveable in an axial direction with respect to said first member; and
  - c) a locking clip engagable with said first member and said second member and moveable between a first unlocked position and a second locked position for locking said first member and said second member in a relative axial position with respect to one another.
2. The corpectomy device of claim 1, wherein said locking clip includes at least one depression and said second member includes at least one ridge engagable in said at least one depression for locking said first member and said second member in a relative position with respect to one another.
3. The corpectomy device of claim 1, wherein said locking clip and said second member include interengaging threads for locking said first member and said second member in a relative axial position with respect to one another.
4. The corpectomy device of claim 3, wherein said locking clip is rotatably mounted on said first member for rotation into and out of engagement with said threads.

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9. The corpectomy device of claim 8, wherein said locking clip includes a first bore and said first member includes a corresponding hole, said first bore and hole being engagable by a screw for locking the position of said locking clip in its locked position.

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a) elongated perforations extending in the axial direction on one of said first member and said second member; and

b) substantially circular perforations on the other of said first member and said second member.

5     11. 12.     The corpectomy device of claim 6, wherein:

a) at least one of said first member and said second member include an aperture providing access to said chamber for packing said chamber with material encouraging the growth of bone, blood vessels and other tissue.

10     12. 13.     The corpectomy device of claim 6, wherein:

a) said second member and said first member have outer axial ends with outwardly extending flanges including teeth on a surface thereof for engaging bone.

15     14.     The corpectomy device of claim 13, wherein said flanges are disposed at an acute angle with respect to a common longitudinal axis of said first member and said second member.

13. 15.     The corpectomy device of claim 6, wherein said second member comprises an inner tubular member and said first member comprises an outer tubular member having a passage for engaging said inner tubular member, said inner tubular member being telescopically disposed within said outer tubular member.

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16. The corpectomy device of claim 15, wherein said outer tubular member includes a hole and said locking clip includes a wedge shaped to be engaged in said hole so that said locking clip engages said outer tubular member.

5 17. The corpectomy device of claim 16, wherein said wedge includes a depression and said inner tubular member includes at least one bridge portion to be engaged in said depression so that said locking clip engages said inner cylinder.

14. 18. The corpectomy device of claim 15, wherein said inner tubular member has an outer surface including first surface portions and second surface portions.

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19. The corpectomy device of claim 18, wherein said locking clip has an inner surface defining an aperture, said inner surface including third surface portions and fourth surface portions, said third surface portions being shaped to correspond to said first surface portions so that said inner tubular member is telescopingly received in said passage when said locking clip is in its unlocked position.

20. The corpectomy device of claim 15, wherein said locking clip has an inner surface including third surface portions and fourth surface portions, each being curvilinear and having different radii of curvature.

18. 21. The corpectomy device of claim <sup>17</sup>19, wherein said outer surface of said inner tubular member defines a substantially square cross-sectional shape, including sides comprising said second surface portions and rounded corners comprising said first surface portions.

5 19. 22. The corpectomy device of claim <sup>18</sup>21, wherein said inner surface on said locking clip includes circular surface portions comprising said fourth surface portions and rounded corners comprising said third surface portions so that said rounded corners on said locking clip are aligned with said rounded corners on said inner tubular member when said locking clip is in its  
10 unlocked position.

20. 23. The corpectomy device of claim <sup>19</sup>22, wherein said circular surface portions on said locking clip and said rounded corners on said inner tubular member include ridges for locking said inner tubular member and said outer tubular member in a relative position with respect to one another  
15 when said locking clip is in its locked position.

21. 24. The corpectomy device of claim <sup>19</sup>22, wherein said circular surface portions on said locking clip and said rounded corners on said inner tubular member include interengaging threads for locking said inner tubular member and said outer tubular member in a relative position with respect to  
20 one another.

5 25. The corpectomy device of claim 15, wherein said outer tubular member includes a wall having an inner surface defining said passage and an outer surface, said outer surface defining a cross-sectional shape different from said cross-sectional shape of said inner tubular member and said passage.

26. The corpectomy device of claim 15, wherein said outer tubular member includes a wall having an inner surface defining said passage and an outer surface, said outer surface defining a circular cross-sectional shape.

27. A corpectomy device, comprising:

10 a) an inner member having a polygonal shape including corners;

b) an outer member having a polygonal passage sized and shaped so that said inner member is telescopingly and non-rotatably received in said outer member so that said inner member and said outer member have  
15 a longitudinal axis;

c) a movable locking clip having an inner surface defining an aperture including corners and locking portions, said locking clip being rotatably mounted on said outer member so that said locking clip is limited in axial movement on said outer member; and

d) mating surfaces on said locking portions and said corners of said inner member for interengagement to prevent axial movement between said locking clip and said inner member.

25-28. The corpectomy device of claim <sup>24</sup>27, wherein said mating  
5 surfaces comprise threads on said locking portions and said corners of said inner member.

26-29. The corpectomy device of claim <sup>24</sup>27, wherein said outer  
member includes a slot and said locking clip includes a pin mounted on said  
locking clip and extending through said slot for limiting the axial movement  
10 of said locking clip.

27-30. The corpectomy device of claim <sup>24</sup>29, wherein said pin extends  
through said slot to limit the rotational movement of said locking clip.

28-31. The corpectomy device of claim <sup>24</sup>27, wherein said outer  
member includes a hole and said locking clip includes a corresponding hole,  
15 said hole on said outer member and said hole on said locking clip being  
engageable with a set screw for fixing the relative position of said locking  
clip and said outer cylinder with respect to each other.

29-32. The corpectomy device of claim <sup>24</sup>27, wherein:  
a) said inner member includes a radially extending first flange  
20 on an outer axial end of said inner member, said first flange including teeth  
on a surface of said first flange for engaging bone; and

b) said outer member includes a radially extending second flange on an outer axial end of said outer member, said second flange including teeth on a surface of said second flange for engaging bone.

30 33. The corpectomy device of claim <sup>29</sup> 32, wherein said first flange  
5 and said second flange are disposed at an acute angle with respect to said longitudinal axis.

34. A method of providing support to the spine of a patient after a cavity is created in the spine by removing at least a portion of a vertebra or vertebrae, comprising:

10 a) inserting into the cavity an adjustable corpectomy device including an outer member having a longitudinal axis, an inner member moveable in an axial direction with respect to the outer member, and a locking clip for locking the relative position of the inner and outer members with respect to one another;

15 b) distracting the corpectomy device by moving the inner and outer members with respect to each other to increase the longitudinal dimension of the device to an appropriate size for supporting the spine;

c) moving the locking clip to a locked position to fix the relative position of the inner and outer members with respect to each other.



35. The method of claim 34, further comprising packing a hollow chamber in the corpectomy device with material for encouraging the ingrowth of bone, blood vessels, and other tissue.

36. The method of claim 34, wherein the step of distracting  
5 includes inserting a first end and a second end of a distraction device into corresponding holes in the inner and outer members, and moving the first and second ends to move the inner and outer members in an axial direction away from each other.

37. The method of claim 34, wherein the step of moving the  
10 locking clip includes engaging the locking clip with the inner member.

38. The method of claim 34, wherein the step of moving the locking clip includes rotating the locking clip.

39. The method of claim 34, wherein the step of moving the locking clip includes snapping the locking clip into engagement with the  
15 inner member.

40. The method of claim 34, further comprising inserting a set screw into a hole in the locking clip until the set screw engages another hole in the outer member, at least one of said holes being threaded to receive the set screw.

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